



Tibbetts Creek Streambank Revegetation

Existing & Proposed Conditions:

A previous stream restoration project along Tibbetts Creek was implemented by the Washington State Department of Transportation (WSDOT) along the park entrance road and extending westward from where the creek turns away from the road. The project provided floodplain widening along the left bank (facing downstream), in-stream log structure placement, streambed gravel placement, non-native vegetation removal, and revegetation with native plant species. However, little or no work was done along the right streambank, which is still lined with dense thickets of Himalayan blackberries and some other non-native vegetation types.

This proposed project would expand and complete the riparian restoration along Tibbetts Creek (without further grading) to include the right stream bank for those stream sections included in the previous WSDOT project. Elements of this proposed project include Himalayan blackberry removal, with ongoing monitoring and the removal of regrowth, and the removal of unnatural debris, especially remnants of an old silt fabric fence. Once the streambank has been so-prepared, native vegetation will also be planted along the



● Project location

streambank on the opposing side from the completed WSDOT project. Fencing should be installed as needed to protect plantings at least until they are established. Ongoing monitoring and maintenance will ensure the survival and growth of the planted vegetation without undue invasion by non-native species. This project could be combined with Project B5 and C9, which address other segments of the Tibbetts Creek corridor.



Himalayan Blackberry along existing streambank



These enhancements have an estimated construction cost of \$80,950. The estimate worksheet can be found in Appendix C.

Lakeshore Enhancement

Wetland, Lakeshore, Upland ■
(X,Y) 407353.650896, 63140.6228152 ■

Existing & Proposed Conditions:

The lakeshore extending from the north side of Sunset Beach to the mouth of Issaquah Creek is a mosaic of wetland and upland conditions. This predominantly sandy area has scattered willows, red-osier dogwood, red alder and black cottonwood trees, some covered with English ivy. It is a high use area of the park, popular with hikers, swimmers, dog walkers, and jet skiers.

Habitat values could be improved in this area by increasing plant species diversity and structural complexity for wildlife food and cover. Increased cover by trees, shrubs, and wetland vegetation could be planned in patches to improve edges and habitat values, while maintaining views and access to the lake. Willow cuttings in particular could be installed in dense clusters to increase and mimic some of the existing condition at the mouth of Issaquah Creek. Ivy should be removed from the cottonwoods. Habitat features such as fallen logs and buffer plantings should also be installed where possible. Enhanced native plant communities and habitat diversity also will serve to discourage congregations of Canada geese as they prefer expanses of lawns and other open areas. This project could be combined with



● Project location

Wetland function	Existing score	Proposed score
Flood/Storm Water Control	8	9
Base Flow/Ground Water Support	8	9
Erosion/Shoreline Protection	4	5
Water Quality Improvement	5	6
Natural Biological Support	17	24
Overall Habitat Functions	4	5
Specific Habitat Functions	6	8
Cultural/Socioeconomic	12	15

Projects A5 and A6, which address improvements to the Issaquah Creek riparian habitat in the same general area.

Wetland and buffer functions can be characterized using the Wetland and Buffer Functions Semi-Quantitative Assessment Methodology (Cooke Scientific Services, 2002). The table above shows scores for each function in the existing condition and predicted improvement based on proposed habitat enhancements. The worksheet for this assessment is included in Appendix B.

These enhancements have an estimated construction cost of \$125,600. The estimate worksheet can be found in Appendix C.



Lakeshore near the mouth of Issaquah Creek

Sunset Beach Wetland Restoration

Wetland, Lakeshore ■
(X,Y) 407166.515427, 62723.4418332 ■

Existing & Proposed Conditions:

The northeast side of the lakeshore wetland is a very low quality, disturbed area dominated by lawn grasses, spike rush, and weeds. Although identified as jurisdictional wetland (part of Wetland 5A in Wetlands Inventory for the Lake Sammamish State Park Property (The Coot Company, 2005)), this wetland area is more like the beach than the more natural wetland to the west.

This portion of the wetland could be restored to increase the functional area and quality of the overall lakeshore wetland. The project would also serve to raise awareness of wetland restoration needs within the park because it is in such a visible, high use area. A diversity of wetland trees, shrubs, and emergent plants could be installed here to improve wetland functions and habitat values. Wetland buffer vegetation should be planted where possible, as described in Project A7.

Increased native plant communities and habitat diversity also will serve to discourage use by Canada geese as they prefer to congregate on expanses of lawns and other open areas. An interpretive sign could explain the project and highlight habitat values to be improved. Fencing



● Project location

Wetland function	Existing score	Proposed score
Flood/Storm Water Control	10	10
Base Flow/Ground Water Support	9	10
Erosion/Shoreline Protection	6	6
Water Quality Improvement	11	11
Natural Biological Support	25	30
Overall Habitat Functions	6	7
Specific Habitat Functions	10	11
Cultural/Socioeconomic	13	14

should be installed as needed and at least until plantings have become established. This project could be combined with Projects A7 and A12, which also address features of the lakeshore wetland.

Wetland and buffer functions can be characterized using the Wetland and Buffer Functions Semi-Quantitative Assessment Methodology (Cooke Scientific Services, 2002). The table above shows scores for each function in the existing condition and predicted improvement based on proposed habitat enhancements. The worksheet for this assessment is included in Appendix B.

These enhancements have an estimated construction cost of \$73,150. The estimate worksheet can be found in Appendix C.



Existing beach is actually a functioning wetland

Pond Habitat Improvement

Existing & Proposed Conditions:

There is a relatively small pond (0.27 acres) along the southwest side of the New Beach parking lot. This detention pond is adjacent to an existing trail from the parking lot, which crosses Tibbetts Creek on a footbridge, and directs people to the baseball fields. Presently, there is a fairly diverse plant community associated with the pond including Douglas fir, red alder and willows, with mostly blackberries in the shrub layer. Emergent and aquatic plants include cattail, yellow iris, slough sedge, lady fern, soft rush, and water smartweed. The pond edges and surrounding buffer areas are mostly lawn grasses, reed canarygrass, creeping buttercup, and birds-foot trefoil.

Because this pond is in a very visible location, improvements are proposed to increase wildlife habitat values while preserving the outlook to the pond from the adjacent trail and park bench. Edge habitat could be increased and improved, and a more effective buffer could be developed. Blackberries, reed canarygrass, and other weedy species along the edges of the pond should be removed and replaced with a variety of native trees and shrubs that would increase edge habitat and food and cover values for wildlife. Low-



Existing pond edged by reed canarygrass



● Project location

growing shrubs, such as rose, snowberry, and salal should be chosen and planted in clusters to preserve views. Existing trees could be limbed to enhance aesthetics and better accommodate shrub clusters. An interpretive sign explaining zoning and layering of plants in the community, edge habitat, and the value of native plants could be installed here.

Wetland function	Existing score	Proposed score
Flood/Storm Water Control	9	10
Base Flow/Ground Water Support	11	11
Erosion/Shoreline Protection	NA	NA
Water Quality Improvement	12	12
Natural Biological Support	23	25
Overall Habitat Functions	4	4
Specific Habitat Functions	8	8
Cultural/Socioeconomic	11	12

Wetland and buffer functions can be characterized using the Wetland and Buffer Functions Semi-Quantitative Assessment Methodology (Cooke Scientific Services, 2002). The table above shows scores for each function in the existing condition and predicted improvement based on proposed habitat enhancements. The worksheet for this assessment is included in Appendix B.

Issaquah Creek Streambank Enhancement

Stream ■
(X,Y) 407358.043491, 63043.986287 ■

Existing & Proposed Conditions:

Near the mouth of Issaquah Creek along the trail on the left (west) bank is an open area bordering the creek. The site includes two live conifers and a snag along the bank, which is otherwise vegetated almost exclusively with reed canarygrass. The area is approximately 105 feet long by 40 feet wide, extending downstream from an existing fence. Proposed project improvements for this area would entail revegetation with native plant species, possibly retaining a viewpoint.



● Project location



Issaquah Creek streambank near Sunset Beach

Proceeding downstream, the buffer areas between the trail and the creek include a fairly diverse and beneficial assemblage of native plant species, however invasive Himalayan blackberries are interspersed throughout.

It is proposed as part of this potential project that these blackberries be systematically and thoroughly hand-removed and that the area be maintained in a virtually blackberry-free condition.



A viewpoint to Issaquah Creek would enhance user experience

Issaquah Creek Streambank Enhancement

Stream ■
(X,Y) 407414.424188, 62938.843907 ■

Existing & Proposed Conditions:

Upstream of the Issaquah Creek footbridge along the left (southwest) streambank, the existing parking lot leaves little space available to provide a well-functioning buffer for the creek. Downstream of the footbridge along the same bank, beginning at the stream, is a rail fence in need of repair, a trail through an open conifer forest, and an enclosed volleyball/picnic area. An open, grassy area occupies the would-be stream buffer areas extending farther downstream to the west.

Removing and reconfiguring parking lot pavement and implementing a native planting plan would create a wider creek buffer. A significantly scaled back version would involve planting the existing 20-to-25-foot-wide grassy strip adjoining the existing pavement to provide a total vegetated buffer width of 40 to 50 feet. For the left bank buffer areas extending downstream from the footbridge, the project would involve relocating the trail along a somewhat meandering alignment through trees closer to the enclosed picnic area, but farther from the creek, and providing native understory revegetation between the relocated trail and the creek. Building a fence closer to the new trail alignment is a possibility, but not a neces-



● Project location

sity; neither would it be necessary to remove the existing rail fence along the top-of-streambank. Native revegetation and trail relocation extending farther downstream through the adjacent grassy area along the streambank would serve to further increase the length of stream for which a widened functional stream buffer would be provided.



Issaquah Creek streambank near footbridge



Wetland Buffer Enhancement

Existing & Proposed Conditions:

There is essentially no wetland buffer adjacent to the lakeshore wetland between New Beach and Sunset Beach. The west side is presently mowed grass and sand. This wetland was identified as Wetland 5A in Wetlands Inventory for the Lake Sammamish State Park Property (The Coot Company, 2005).

Wetland buffer plantings should be installed to create additional edge habitat and a more diverse plant community. Conifers, in particular, are lacking in this area, and the addition of firs and cedars would enhance the habitat diversity. There is space for an approximately 25-foot wide buffer area on a hummock between the beach and the wetland. This area could be extended around the wetland as far as possible to the east. Interpretive signage along the trail could be installed to explain the improvements and provide information about habitat features. Fencing should be installed as needed and at least until plantings have become established. This project could be combined with Projects A3 and A12, which also address features of the lakeshore wetland.

Wetland and buffer functions can be characterized using the Wetland and Buffer Functions



● Project location

Wetland function	Existing score	Proposed score
Flood/Storm Water Control	10	10
Base Flow/Ground Water Support	9	10
Erosion/Shoreline Protection	6	6
Water Quality Improvement	11	11
Natural Biological Support	25	30
Overall Habitat Functions	6	7
Specific Habitat Functions	10	11
Cultural/Socioeconomic	13	14

Semi-Quantitative Assessment Methodology (Cooke Scientific Services, 2002). The table above shows scores for each function in the existing condition and predicted improvement based on proposed habitat enhancements. The worksheet for this assessment is included in Appendix B.



Existing wetland buffer

Wetland, Upland ■

(X,Y) 407650.613592, 62999.7960113 ■

Open Field Habitat Enhancement

Existing & Proposed Conditions:

The field south of the great blue heron colonial nesting site (heronry) is approximately 15 acres in size. This area is mostly upland, bordered by wetland to the west, north, and east, and by Issaquah Creek to the south. An existing trail is located in the southern portion of this field. This area was not specifically delineated in the Wetlands Inventory for the Lake Sammamish State Park Property (The Coot Company, 2005), but was generally described and identified as Issaquah Creek Uplands. The report characterizes this area as a "combination of slightly higher ground built up from flood overflow deposition plus the drainage effects from the creek channel 'zone of influence' which has created mostly linear 'islands' of upland ground along both sides of the creek."

This area provides an opportunity to create a variety of upland plant communities which would provide a unique assemblage of food and cover opportunities for wildlife diversity. Upland forest and shrub patches or islands could be planted in a scattered fashion to maximize edges while maintaining the open meadow character of the area. The view of the heronry should be preserved. An interpretive sign along the trail could



● Project location

enhance the awareness of this special feature, while explaining the need for protection. The nests are quite a distance away from the trail, mostly only visible when trees are without leaves, and access is limited by dense shrubby thickets on the north side of the field.



View of heronry from the open field



Soccer Field Infrastructure Enhancement

Wetland, Upland, Recreation ■

(X,Y) 407402.995668, 62383.4178561 ■

(X,Y) 407671.946829, 62271.4183643 ■

Existing & Proposed Conditions:

Much of the main soccer field complex (westernmost fields) is jurisdictional wetland. The edges adjacent to the mowed and maintained fields are mostly reed canarygrass with some blackberry thickets and other weedy species. There are parking lots on both the west and east sides of the fields. This area was identified as Wetland 6A in Wetlands Inventory for the Lake Sammamish State Park Property (The Coot Company, 2005).



● Project location



Existing open field lacks habitat values

There is opportunity here to improve and enhance some wildlife habitat values, while creating an aesthetically pleasing and useful area for families attending soccer events. This could include a small shelter with tables and a restroom, as well as landscaping with native shade trees and shrub clusters that would provide increased food and cover opportunities for wildlife. There is room for such a feature at both the west and east sides near the existing parking lots.

Orienting visitors to their location in a much larger park setting and including interpretive elements would enhance recreational opportunity for families and children before, during and after soccer games. This project also could be combined with Project A17 for enhanced educational and passive recreational elements.



Increasing demand for amenities near soccer field